



THE USE OF TEAS AND NATURAL PRODUCTS IN THE TREATMENT OF VOCAL ALTERATIONS: A REALITY IN THE BRAZILIAN AMAZON.

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ABSTRACT

Hoarseness is a prevalent vocal symptom in the population and many treatments are possible for this type of symptom, from conventional medicines to the use of homemade medicines recipes. On the Amazon region to treat this symptom is common the use of natural products based on popular knowledge, however some care must be taken in this process. This study aims to understand which natural teas or products have been used in the Amazonian reality for the treatment of hoarseness and to correlate the treatments used with the etiology of the symptom. A literature review was carried out through the search of scientific articles in the Virtual Health Library (VHL) database (Lilacs and Scielo), in Portuguese and English languages, from 1990 to 2018, and the application of a questionnaire for sample selection. The main results were the absence of medical consultation in the presence of the symptom and the high rate of treatment using homemade recipes. It is concluded that among the Amazon population there is a significant number of people who use natural products from the Amazon forest for the treatment of vocal disorders, however, it is important to understand that some of these products have not been proven yet their effectiveness or have specific indication treatment for prescription, therefore, their use should be further studied so that it can be used safely by the population.

KEYWORDS : Herbal teas, Medicinal Plants, Traditional Medicine, Dysphonia and Speech language and hearing sciences.

INTRODUCTION

About 80% of the world population has already made therapeutic use of medicinal plants (herbal medicine) for the treatment or prevention of some disease. The earliest reports of the use of herbal medicines date back to 2838- 2698 BC in China, and these practices have influenced for a long medical practice throughout the world. The advent of scientific and evidence-based medicine has brought about an increase survival of until that time considered deadly diseases and has modified the way we relate to our health (OLIVEIRA, ARAÚJO, 2009) Even with these changes in the dynamic relationship of the health-illness-recovery process and the increase of access to health systems, in some cultures it is possible to identify the maintenance of habits that are currently considered as "alternative" for the diseases treatment.

Brazil has the largest biodiversity in the world, with about 20% of herbal species on the planet and whose greatest concentration is located in the Amazon biome, so the use of popular medicine is quite common especially in poor regions where it is sometimes the only therapeutic resource available for the most isolated and culturally widespread communities.

Many medicinal plants used on Amazonian communities where the popular medicine is culturally stronger are also used as raw material in the manufacture of herbal and other medicines (LEÃO, FERREIRA, JARDIM, 2007) One of the most common complaints in the speech-language clinic is hoarseness, a symptom of a psychodynamic alteration of the larynx and vocal cords function, whose impairment is characterized by distortion of the fundamental frequency of the voice. Inflammation and infections in the oral, pharyngeal, laryngeal and increase of effort to produce voice are the main causes of hoarseness. Being a symptom of multifactorial etiology can be treated in different ways depending on its origin.

On clinical practice it is common to identify the use of popular knowledge such as the use of teas and other natural recipes to cope with hoarseness and also for other speech-language disorders. In this sense, this work aimed to understand which teas or natural

products have been used in the Amazonian reality for the treatment of hoarseness and to correlate the treatments used with the etiology of the symptom.

MATERIAL AND METHOD

This is a narrative review of the literature of periodicals. Therefore it was made a bibliographic search by means of the sources of searches constituted by electronic resources in the following databases: Latin American and Caribbean Literature in Health Sciences (LILACS), Health Information from the National Library of Medicine (Medline), Web of Science, Scopus and in the electronic library Scientific Electronic Library Online (SciELO) published between 1990 and 2018.

The following descriptors were used: Herbal Tea, Medicinal Plants, Traditional Medicine, Dysphonia and Speech Therapy. The descriptors mentioned are found in the Descriptors in Health Sciences (DeCS).

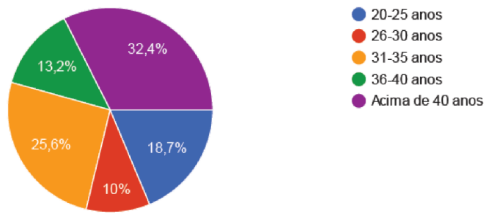
Data collection took place in May 2018 through an online questionnaire containing 10 questions, in which the first 3 served to categorize the sample.

The results were analyzed and organized in circle graphics showing the results related to the statistical base of the research. Then, the articles were identified, in the search sources mentioned and selected those that met the objectives of the study, using as criteria articles in the Portuguese, English and Spanish languages and published in the last 10 years.

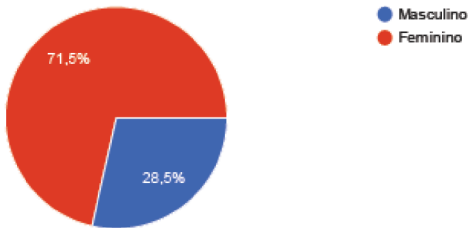
DISCUSSION

The sample for the development of the study was composed by 221 people who answered the online questionnaire formed by 10 personalized questions. The results were analyzed and arranged in graphs for better visualization.

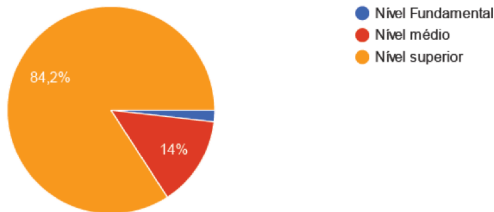
The study began with the delimitation of the age group of the participants (Graph 2)



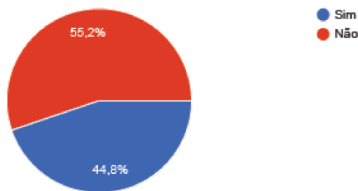
Graph 1 - Age of participants



The second graph represents the sexual gender of the participants, showing that the most part of studies population were women (71.5%) and only 28.5% were men.



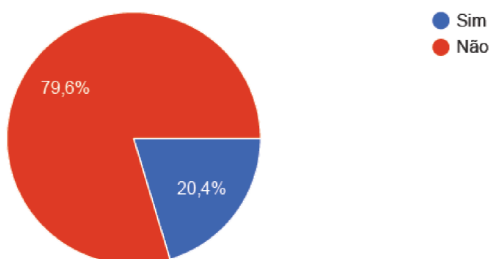
The third graph shows that 84.2% had higher education (college level), 14% had high school level and 1.8% had only a elementary school level.



Graph 4 - Professional use of voice

On the Graph 4 we can see the proportion of professional voice use on the participants. The statistics data were quite balanced, with 55.2% of individuals who use voice professionally and 44.8% who did not use voice during their laboral exercise.

When asked about the frequency of the hoarseness symptom, most of them answered that they did not present it frequently (79.6%), only 20.4% reported periodicity in their presentation. (Graph 5)



Graph 5 - Frequency of hoarseness symptom

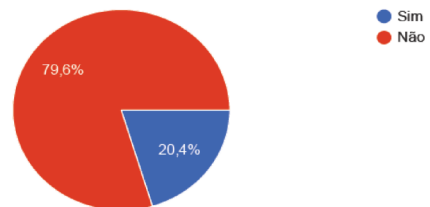
For Behlau and Pontes (2009) the voice is produced by the vocal cords that are located in the larynx and is shaped and amplified by the phono articulatory organs like mouth, nose and tongue, all of which are coordinated by the brain. When there is musculoskeletal harmony of the phonatory apparatus, it is called euphonia, on the other hand, when minimal efforts, discomforts or disharmony are presented during vocal production, we find a dysphonia which is characterized by distortion of the fundamental frequency of voice formation (Behlau et al., 2001).

The fundamental frequency (f0) is the first frequency produced in the space between the vocal cords, called glottis, associated with variations in height (acute and severe) and intensity (strong and weak). This frequency varies between men and women, where the range of normality in men is 80 to 150 Hz, since they anatomically have the largest and widest vocal cords. On women, the normal range varies between 150 and 250 Hz, due to the differentiated anatomo-physiological characteristics such as smaller and less thick vocal folds (BEBER and CIELO, 2011; KREMER and GOMES, 2014).

One of the most common and known symptoms related to voice problems is hoarseness, almost always accompanied by pain or discomfort during voice production. However, its causes may be associated with several etiological origins.

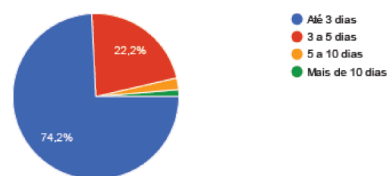
Chart 6 shows that in the presence of hoarseness, the vast majority (79.6%) of the interviewees did not seek medical attention to treat the vocal symptom, only 20.4% reported seeking care. This fact, while reflecting the inequalities of our health context, where we still find people without access to specialized care, may also reflect a certain neglect of care for vocal symptoms, as well as the late treatment of the most serious diseases that have as a symptom the vocal issue, such as laryngeal neoplasms.

According to Carvalho and Hoifman (2010), grouped oropharyngeal and laryngeal tumors represent the sixth largest cancer incidence in the world and Brazil has the highest prevalence rates of the disease in Latin American countries, making us reflect that the differential diagnosis of vocal symptoms can help in improving care for more severe cases.



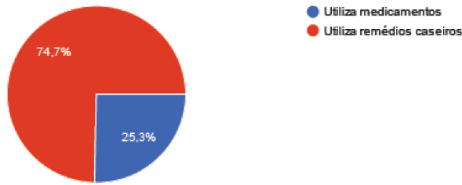
Graph 6 - Looking for medical attention when hoarseness

The seventh graph reveals that 74.2% of respondents stated that when they become hoarse, the symptom lasts for up to 3 days, 22.2% said they last for 3 to 5 days, 2.3% said they last for 5 to 10 days, and only one small sample of 1.4% reported lasting more than 10 days. According to Vieira (2012) a hoarseness lasting more than 15 days requires attention and it may be necessary to evaluate otorhinolaryngological and speech-language pathology, especially when accompanied by other symptoms such as cough, odynophagia, which is pain to swallow, and / or aphonia. Since these symptoms are also related to more serious vocal pathologies, such as laryngeal cancer, for example.



Graph 7 - Mean duration of hoarseness

Regarding the conduct of the interviewees, a significant amount (74.7%) uses home remedies for the treatment of hoarseness, while only 25.3% of the sample makes use of standard medications prescribed by a physician for the symptom. However, for Pinho (1998), these popular practices should be observed with caution, since some of them have their effects still unknown for effective treatment of changes in vocal folds and in some cases may present side effects, adverse effects or be a contraindicated procedure.



Graph 8 - Conduct during hoarseness

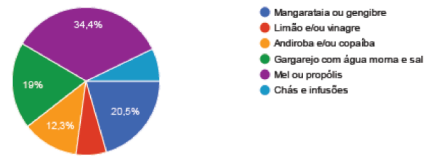
The graph 9 shows that both the natural products and the homemade recipes used are quite varied, however, some of them have been more statistically representative, such as: honey and propolis (34.4%), mangarataia/ginger (20.6%), the gargle with warm water and salt (19%) and andiroba or copaiba (12.3%) which are amazonian medicinal plants. The teas and infusions were cited by 7.2% and the lemon and vinegar by 6.7% only.

These findings can be justified because, historically, honey has been used in formulations and treatments of numerous clinical conditions due to its medicinal and cosmetic properties as well as other hive products such as pollen, royal jelly and propolis.

Honey is mentioned in the literature as a very rich and high energy food, consumed worldwide and extremely important for the health of the human body when pure, because it has several properties: antimicrobial, curative, soothing, regenerative tissues, stimulant, among others (BIZZARIA & FILGUEIRAS, 2003). The ginger (*Zingiber officinale*) is a herbaceous plant of the family of Zingiberaceae, originating from the island of Java, India and China. In the northern region of Brazil is known as mangarataia. Palmer et al (2008) refers to ginger as one of the oldest and most popular plants in the world, being used in folk medicine of almost all peoples of the planet. In their work, the referred authors present in a synthesized way the ginger, its denominations, scientific nomenclature, botanical description and medicinal purposes. Among the indications are the gastrointestinal stimulant, aperient, combat intestinal gases, vomiting and hoarseness.

The use of gargle was also cited in the study by Tenor, Cyrino & Garcia (1999) who investigated the vocal perception for the occupational risk of developing vocal disorders in pre-school teachers and found as procedures used the use of gargarejo in 14.3% of the study population. Moraes (2004) clarifies that the ingestion of water is beneficial for the hydration of the organism as a whole and the larynx, but the gargle does not have the same hydration effect. However the gargle with warm water and salt acts as an antibactericide and helps to disinfect and eliminate microorganisms, because the saline solution associated with the act of gargling releases the thick mucus impregnated in the mucosa eliminating irritating substances.

The use of andiroba and copaiba are justified by their medicinal properties (Bloise, 2003) with several volatile and resinous chemical constituents of antibacterial action (Bloise, 2003; Biavatti et al., 2006) and anti-inflammatory (Falcão et al., 2005);



Graph 9- Natural treatment of hoarseness

On the last graph we can see that among the causes related to hoarseness, the majority of the participants (46.2%) reported having vocal changes during or after flu and cold, followed by intense voice use (26.7%) due to changes of temperature (14.9%) and by allergic processes (9.5%).

This information corroborates with the literature showing an incidence of 3 to 6 cases per year of respiratory tract infections (DALCIN and SILVA, 2009), accompanied by a 3-fold higher rate of vocal complaints in teachers when compared to other professionals (FUESS and LORENZ, 2003). Temperature changes can influence the incidence of infectious diseases and therefore appear as causes of vocal changes, as well as respiratory allergies that are also influenced by these changes being more incident in colder temperatures and lower relative humidity.

According to Behlau and Pontes (2001), dysphonias can be classified into three groups: functional dysphonias (for incorrect use of voice, vocal maladaptations and psychogenic alterations), organofunctional dysphonias (triggered by the association of organic and functional factors) and organic dysphonias communication bodies and / or other organs and apparatus).

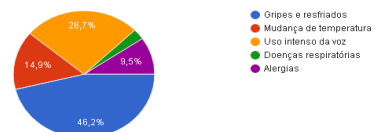
They also point out that allergic disorders, such as rhinitis, nasal obstruction and constant colds, are the most common causes of dysphonia. In influenza cases, the virus and bacteria attack results in inflammation in the respiratory tract, causing, consequently, edema in the vocal folds for excess mucus and release of histamines that irritate the mucosa, altering its vibration and resonance capacity, as well as its fundamental frequency, leaving the voice more serious.

The intense and uninterrupted use of the voice for long periods is the most reported cause of hoarseness according to the studies of Quintanilla (2010). In such cases, this habit, besides generating overload in the vocal folds, is often associated with other inappropriate practices such as lack of hydration, increased vocal intensity, among others, as can be confirmed by Souza (2000), who in his studies states that only the intense and prolonged use of voice does not determine the onset of a voice disorder. This behavior associated with continuous vocal effort and lack of knowledge of vocal techniques, as well as the lack of hydration may be factors that conjugate influence on the impairment of vocal quality and the installation of a vocal disorder.

Abrupt changes in temperature may contribute to an environment conducive to a series of allergic reactions, mainly respiratory, that can directly influence vocal production.

In the case of allergy patients, Pinho (2003) cites that in his studies, individuals with upper or lower airway allergies are more likely to have vocal alterations

Na maioria das vezes qual a causa da rouquidão?
221 respostas



Graph 10 - Causes related to hoarseness

CONCLUSIONS

The study showed that most participants do not usually seek medical attention in the presence of hoarseness, which can be a cause for concern, as hoarseness may be a symptom of more serious illness. Another important finding revealed in this investigation was the predominance of the use of homemade recipes.

So, it is concluded that the use of natural remedies, infusions and teas are a common practice among Brazilians living on Amazon region, because the traditional medicine culture is a very present in the people culture there and also the difficulties of access to towns and cities farthest from large urban centers often resort to this type of practice for lack of access to traditional medicine treatments.

It is also noticed that the statistical findings regarding the causes of hoarseness are in agreement with the data found in the literature. However, this kind of practice can not be generalized, there is not enough scientific evidence to point out these forms of treatment as a standard for all types of causes of hoarseness, proving its effective properties for treatments of hoarseness related to inflammatory or infectious, diseases associated. Although, there is no evidence of effectiveness to treat dysphonia of functional causes,

In view of the data obtained in this study and a bibliographical review, it was concluded that the great use of natural products and the popular knowledge itself brings with it the need for research to clarify and confirm information about its properties in the treatment of hoarseness, aiming at the minimization of adverse effects and providing correct indications of use.

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